End #1

Lockheed Aircraft Corp.	ENGINEERING STUDY [X] CHANGE PROPOSAL [X]	LAC - 8 DPD-2065-S COPY 3 OF 4
DATE 3-19-59	AFFECTS: WSPO [X]	PROJECT [X]

NAME OF MAJOR COMPONENT	PART OR LOWEST SUBASSEMBLY	PART NO. & MODEL OR TYPE
Airplane	Drag Chute Hook Assy.	F 180-121

TITLE OF PROPOSAL :
Rework - Drag Chute Hook Mech.

NATURE OF PROPOSAL: This proposal includes Mod. and overhauling the Drag Chute F-180-121 Hook Assembly, plus addition of a warning flag on the hook. The mech. is mod. by eliminating the F-180-164 Cam and 726233 Spring. The F-180-126 Catch and F-529-2 Arm are replaced by improved parts F-706-2 Catch and F-706-3 Cross Arm. New F-180-112 Rockers and Bearings will be supplied to replace worn rockers. F-180-137 Pin will be replaced by a bolt and nut. The F-180-119 Lever Assy. will be replaced by new modified assy's. Travel stops for the lever are added. A drill template will be supplied for the forward stop location. Replacement F-475-2 Springs will be supplied. Replacement F-180-122 Catch, F-180-105 Roller Assem., F-180-123 Pin and F-180-124 Pin parts will be supplied to replace worn parts. F-706-6L & R Plates are included to retain the F-180-124 & -125 Pins.
(Cont. on Page 2)

REASON FOR PROPOSAL : The present automatic cocking drag chute hook assy. has become unreliable in service due primarily to wearing of the parts and accumulation of dirt and grime in the bearing surfaces. This condition is aggravated by the elevated temperatures the mech. encounters.

Laughlin AFB has proposed a simplified version of this mech. which eliminates the above problem but also requires two men to cock the system by eliminating the F-180-164 Cam. This change proposal is based on the LAFB proposal. Also included in the LAFB proposal and in this proposal a re-design of the F-180-126 Catch to make it less sensitive on tripping action.

STATINTL

(Cont. on Page 2)

ES	ESTIMATED COST AND TIME INVOLVED :	
	ADDITIONAL FUNDING REQUIRED : None (SP-1918)	
CP	ESTIMATED COST FOR KITS OR PARTS	See Page 3.
	ADDITIONAL FUNDING REQUIRED : None (SP-1917)	STATINTL

ITEMS AFFECTED BY PROPOSAL :

SAFETY	MISSION EFFEC-TIVENESS	PERFORM-ANCE	OPERATING PROCEDURE	INTER-CHANGE-ABILITY	WEIGHT OR WEIGHT & BALANCE	TOOLS & SUPPORT EQUIPMENT	MAINTE-NANCE PROCEDURE	SERVICE LIFE	FLIGHT MANUAL	MAINTE-NANCE MANUAL
☐	☐	☐	☐	☐	☐	☐	☒	☒	☐	☒

EST. MAN/HRS. REQ'D. TO ACCOMPLISH CHANGE IN FIELD 32 when done at 100 hr. inspection.

SOURCE OF PARTS FOR KIT LAC	AVAILABILITY 4 to 6 WEEKS AFTER APPROVAL
DISPOSITION OF SPARES AFFECTED Effect on spares negligible.	STATINTL
INITIATED BY : STATINTL - LAFB	DISAPPROVED : WSPO PROJECT 4/9/59

Nature of Proposal: (cont.)

The Hook Assy. mod. required the F-180-122 Catch be spring loaded closed. F-706-4 Clip, F-706-9 Spring, F-706-5 Socket Bolt, NAS322-13-0063 Cable Assy., MLB Aluminum Pulley are required for this mod.

The warning flag is shown on F-711 drawing, consists of a spring loaded shaft with a lever on one end riding on the rocker cross arm and a red and white colored flag on the other end inside the tail fairing.

This flag is visible thru a .75 dia. hole in the fairing. The color showing indicates the rigged condition of the hook. White indicates hook unlocked and "OK". Red indicates the hook locked and chute un-jettisonable. This is to be used on a pre-flight walkaround inspection.

Adjustable stops will be installed approximately 1.0 inch each side of the fuselage center line. The stops will be fastened to the structure under the fiberglas chute pan. These stops will maintain the drag chute door position without depending on the door skin trim to maintain position.

Preliminary copies of drawings F-706 and F-711 are attached.

Reason for Proposal: (cont.)

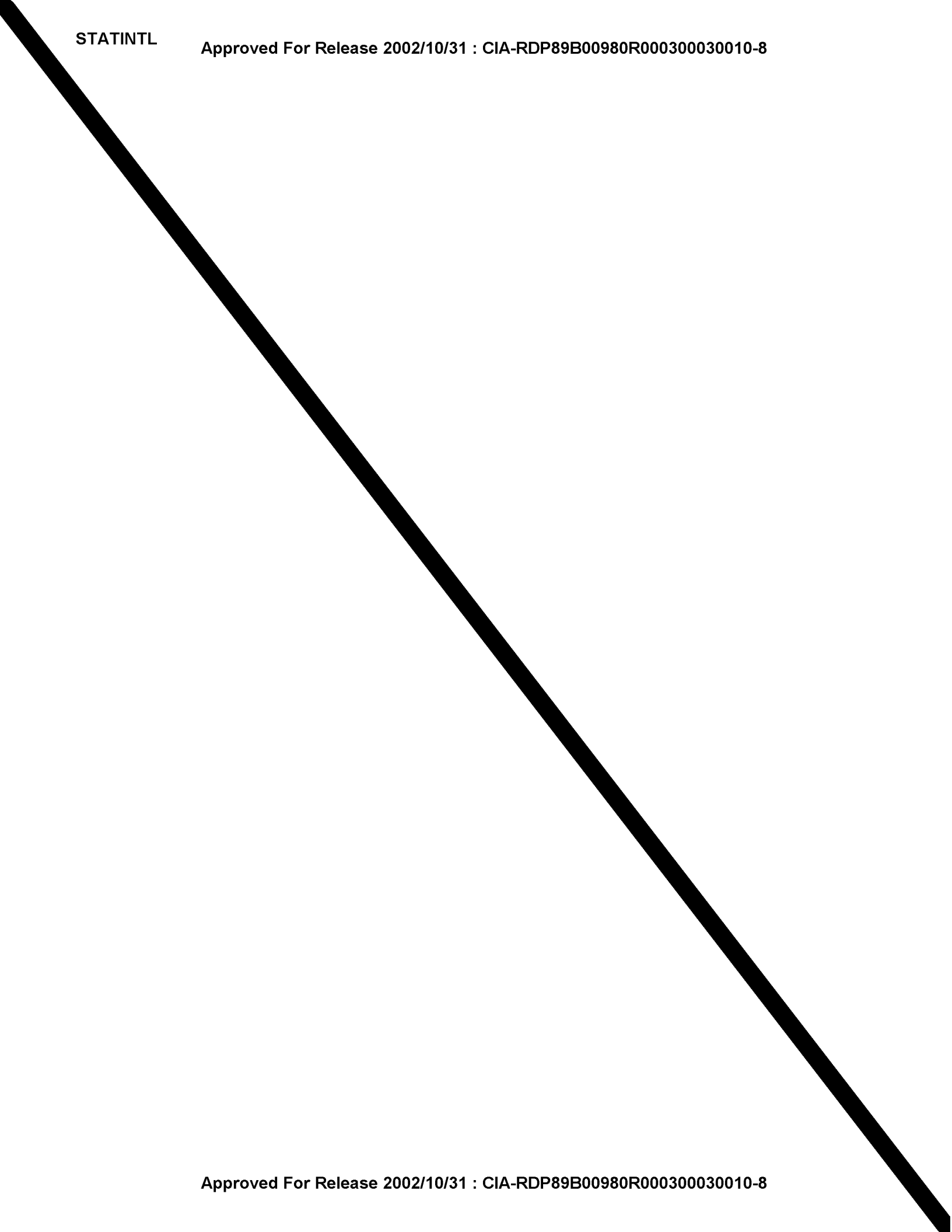
Once the chute is installed and the doors closed there is no means of checking the mechanism to make sure the chute catch is locked or unlocked before takeoff. Incorporation of the simplified mechanism provides space to install a warning flag similar to the one on the lower equipment bay hatch. This flag which is visible thru a.75 dia. hole in the tail fairing indicates whether the catch has tripped and the F-180-111 Rocker Assembly is locking the chute hook.'

The simplified drag chute mechanism was installed on airplane No. 358 at EAFB. Twelve landing and three ground engine running tests have been made to date. The chute has deployed and jettisoned properly in all tests.

To improve the drag chute door fit and thus minimize the possibility of the chute being deployed in flight, stops should be installed against the forward surface of the door under the fiberglas chute pan.

This change will be incorporated on S.B. #375.

This change proposal covers U.R. 58-730 dated 6 June'58 and U.R. 59-37 dated 30 Jan.'59



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